



The **NEW TRAIL**



THE EDUCATION BUILDING

An Artist's Conception—South-east view

See Particulars—Page 12

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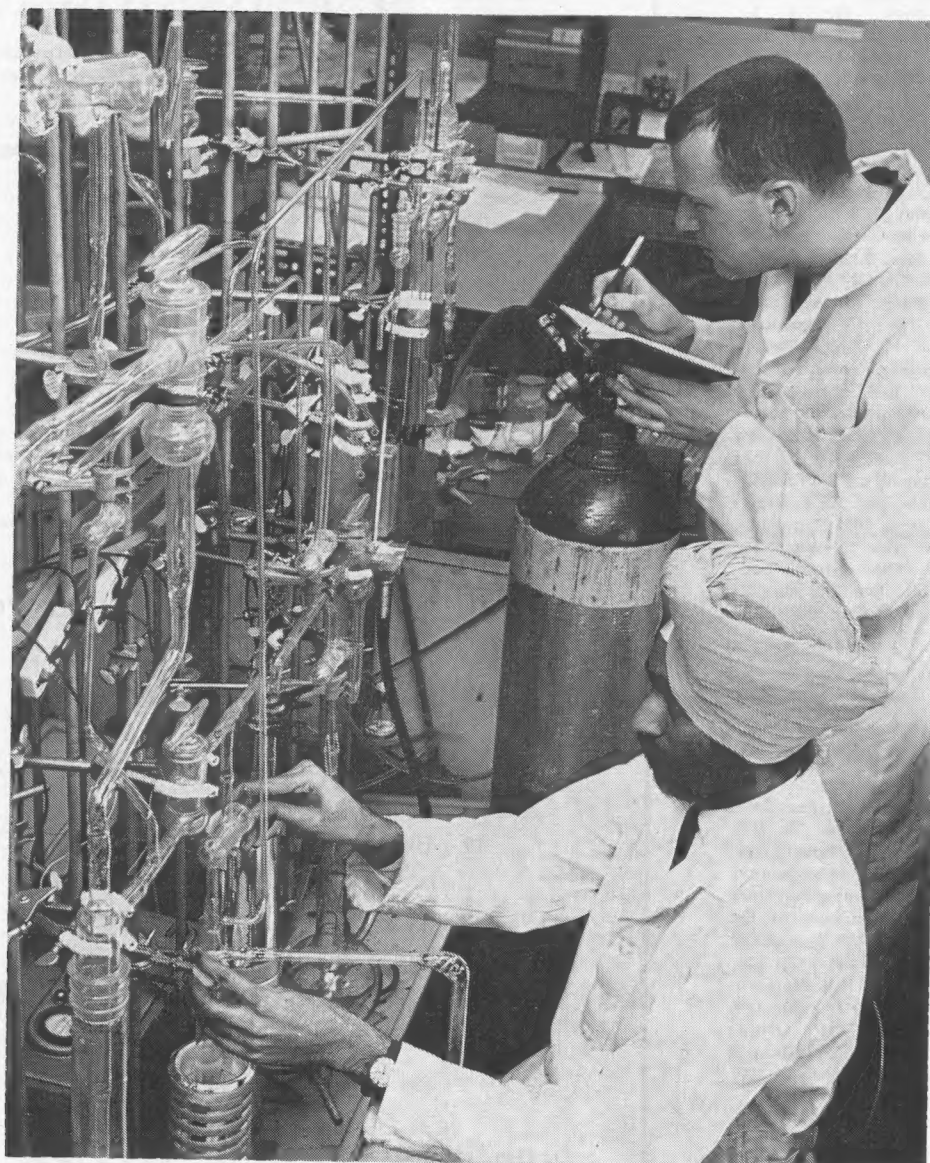
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By the Lights of Labs

Research Report By Iain Macdonald



CHEMISTRY

Tom Dingle and Kuljit Sidhu (India) work on excitation apparatus which employs new principles in breaking through molecular bonds, yielding information on energy relationships in atomic structure.

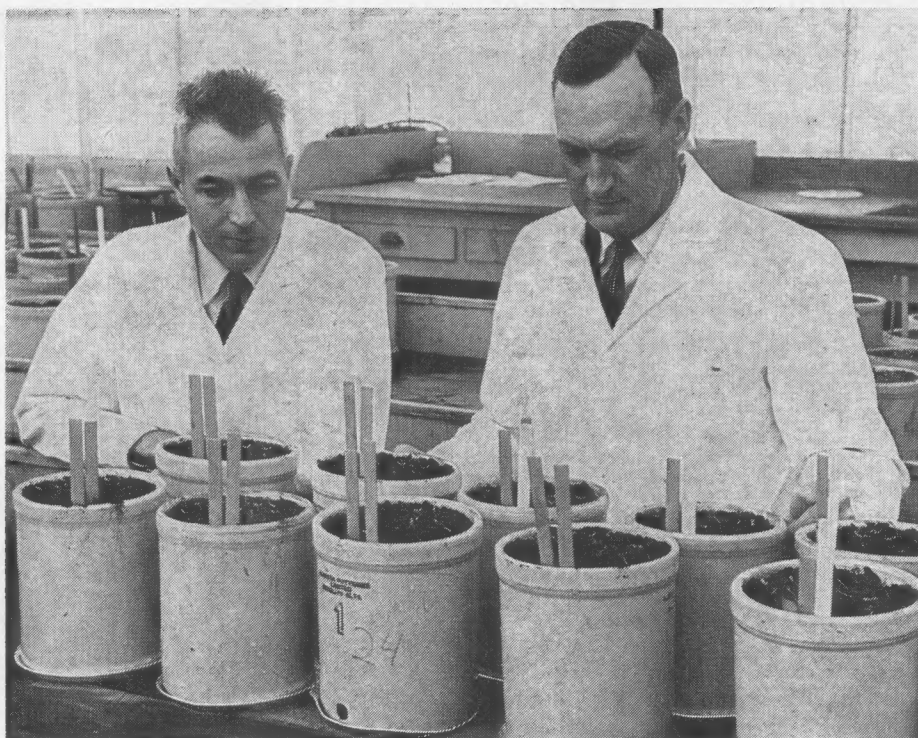
FOR the past few years Edmontonians out driving and looking at Christmas light decorations have marvelled at the number of lights shining at the University of Alberta.

They are reflecting the work of increasing numbers of graduate students and research fellows from all parts of the world who have come to Edmonton for their graduate degrees—keeping the lights of their labs and studies burning, even on Christmas Eve.

This year, more than 350 students enrolled with the University's faculty of graduate studies. The largest single nationality groups came from Britain, the U.S., India, Pakistan and Hungary. Heavy enrolments were for studies in chemistry, physics, and agricultural and biological subjects. One Pakistani student arrived to study psychology in the fast-growing social sciences department. Between early September and early November, 1961, some 250 requests for information regarding post-graduate facilities at Alberta were received by the faculty of graduate studies, headed by Dean A. G. McCalla. Almost 30 percent of these were from outside Canada.

University officials are quite concerned with problems encountered by an increasing population of overseas students, of different races, colours and religions. Most students report some difficulty getting established: some report hostility. But once established, the graduate student settles down to work with an enthusiasm and purpose quite distinct from the less directed efforts of the average undergraduate.

There are several reasons why graduate enrolment and amount of research should be climbing in both quantity and quality. The university expansion program has provided a wealth of new facilities which makes possible a great increase in research. Availability of financial help through such agencies as the Colombo Plan makes it possible for overseas students in increasing numbers to look to North America for their higher education. The jet age has reduced transportation costs in



SOIL SCIENCE

Drs. G. R. Webster and J. A. Toogood examine pots containing alfalfa seedlings being grown in a problem soil from near Edmonton. The scientists hope to learn what agents in the soil cause the alfalfa to have retarded growth second time around in normal crop rotation.

the air, and new shipping developments have cut sea travel costs.

A sample of the research projects underway this year gives some idea of the scope and nature of the work being done. In laboratory space on the third floor of the Chemistry building, the eastern five-storey chunk of the new Physical Sciences centre, graduate students are working on two photochemistry projects assigned by Dr. Harry Gunning, head of the department of chemistry. These promise new light on energy relationships in the atom. In the greenhouses adjoining the Agriculture building, scientists are studying effects of certain local soils on alfalfa growth. They are trying to determine why the alfalfa should appear with stunted growth the second time through in crop rotation. And in the psychology department, a new machine promises to yield data regarding the nature of human autokinesis—an illusion common to all people, seen when a stationary pin-point of light in a darkened room

appears to move in various directions.

The chemistry studies are being directed at separation of isotopes of mercury by light, and study of the behavior of excited atoms of argon—an inert element. Mercury vapor containing all the normal isotopes of mercury (identical in chemical properties but differing in the number of neutrons they possess in their nuclei) is passed through a maze of glass tubing and exposed to a mercury vapor lamp containing mercury of one specific atomic weight. This light energizes only those atoms of mercury of the same atomic weight, while the other isotopes pass through unaffected.

By a process akin to natural resonance of sound waves, the light waves from the mercury isotope source excite the mercury in the apparatus so that only the specific isotope has extra energy to impart as it travels through the system. It reacts with certain organic gases, which are removed as samples and

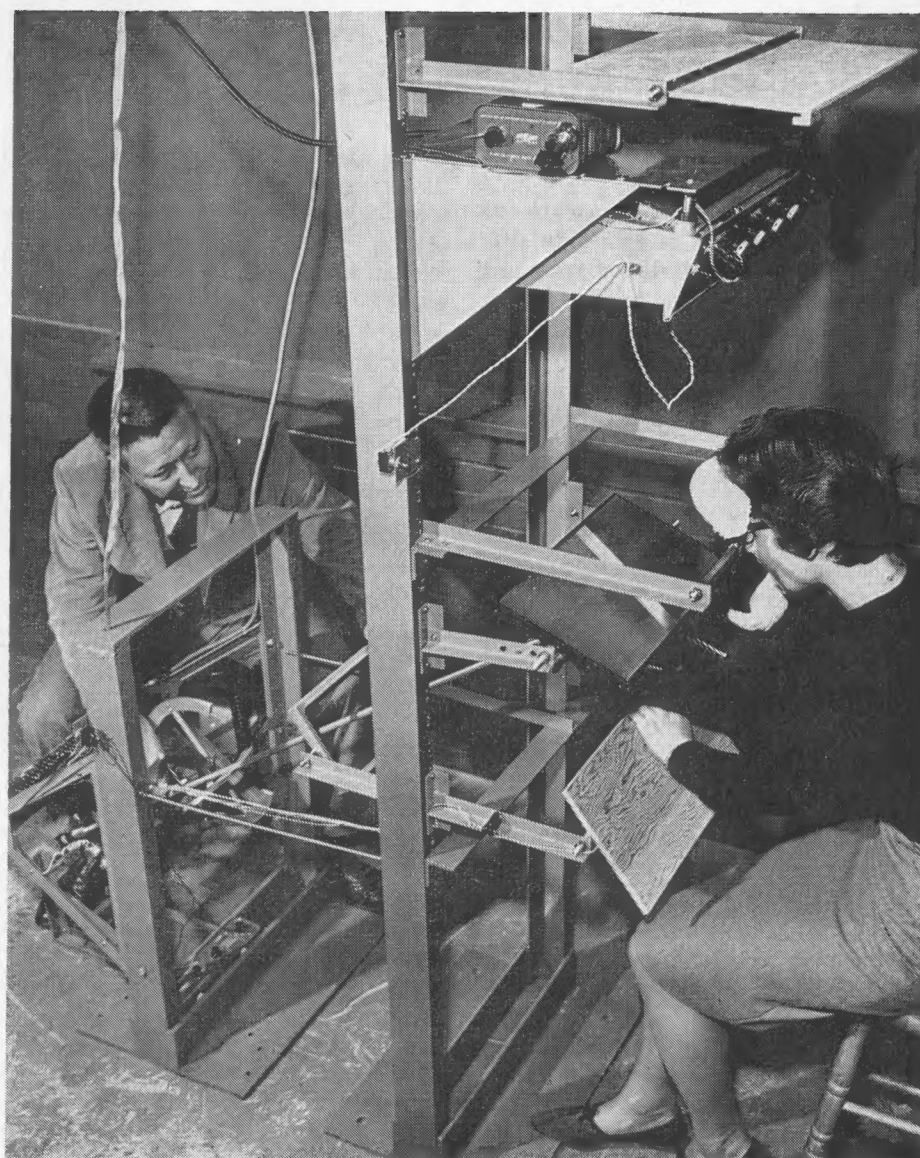
analysed in a mass spectrometer. The particular isotope is found to predominate in the compounds thus formed.

Similarly, in the argon experiment, although the excited argon isotopes do not react with anything, they collide with other molecules and the extra energy acts to tear them apart. From analysis of the effect on compounds of this powerful argon atom, evidence is being compiled showing how particular compounds break down, and why.

The agricultural experiment studying growth of alfalfa in particular soils is just beginning. The first seedlings have been planted in rows of large grey pots set about tables in a greenhouse to fulfill the needs of statistical experimental control. Eventually, it is hoped to show whether natural or unnatural soil characteristics are responsible for retarding growth of the plant in its second appearance in normal crop rotation. This experiment is being supervised by Dr. Webster, of the faculty of agriculture's department of soil science.

Ingenious attempts to control the unreal characterize the design of the machine standing in a grey-walled room in the psychology department. Dr. Joseph Royce, head of the department, and graduate student Nadia Hochachka hope that a combination of observing the normal illusion and trying to duplicate its effect will show how the mind "sees" something it cannot possibly see.

All people see the stationary point appear to move in the pitch black room. But would all people see a point which was really moving and be able to follow its real path, or would they tend to perceive only their own illusion? With what amount of light does the illusion fail to occur? The machine has a recording stylus, with which a subject can chart the moving point's path, when it appears to be moving and when it actually is moving. Dr. Royce hopes data will be compiled which will provide a guide to individual error potential for this illusion, and so in-



PSYCHOLOGY

Dr. Joseph Royce and graduate assistant Nadia Hochachka study autokinesis (illusion in which a stationary point of light in a darkened room appears to move).

dicating how people vary in susceptibility.

Much imagination and work goes into this process of learning and understanding more and more about bits of nature. The University's rapid, surging growth and the new climb in numbers of dedicated young men and women from all parts of the world are contributing in a real and important way to the accelerated development of Alberta as one of the major provinces of the Dominion—rich in all her natural resources.

Sons and Daughters of the University

Years	No. of Graduates (accumulated totals)
1920	316
1925	1,027
1930	1,953
1935	3,251
1940	5,087
1945	7,146
1950	11,707
1955	15,818
1960	20,724



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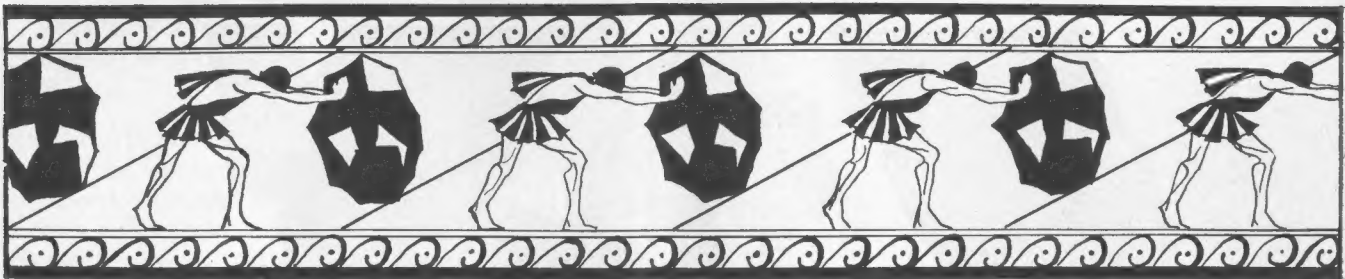
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Excerpts from . . .

The President's Report to Convocation

November 18, 1961

THE year 1961 will probably go down in history as the greatest year for planning since the University's foundation. This is not surprising, since we are about to experience a great increase in the rate of growth of the University in all its aspects, and it is essential that we make intelligent provision for the development by a careful scrutiny of the University's needs in organization, curriculum, staff, and physical facilities.

The Board of Governors have been conscious of this need for some time now and they agreed earlier this year to ask the provincial Government to appoint a committee to survey the needs of higher education throughout the province. The Lieutenant Governor in Council has now appointed such a committee under the chairmanship of Honourable E. W. Hinman, Provincial Treasurer, and several meetings have already been held. The work of this committee is expected to continue over the coming months, and I understand that a progress report may be made to the Legislature, probably at its regular session in 1962.

The University itself is also concerned about plans for the future and one of the busiest groups on the campus is the academic planning committee comprising the Deans' Council and representatives of the teaching staff under my chairmanship. The function of this committee is to decide, insofar as possible, the needs of the province in higher education over the coming years and to assign priorities to the various proposals that have come in from the academic departments and from interested individuals and groups throughout the province. Several meetings have already been held and more are

The Honourable Chief Justice Colin Campbell McLaurin, shown right, shaking hands with University Chancellor L. Y. Cairns in the company of Ian Nicolson McKinnon, chairman of the National Energy Board. Both the Chief Justice and Mr. McKinnon received Honorary Doctor of Laws degrees at Fall Convocation held in Calgary.

scheduled. When the work of this committee has been completed, its recommendations will be forwarded to the Board of Governors and to the Government's survey committee on Higher Education.

Another active committee is the Campus Planning committee under the chairmanship of the Vice-President, Dr. L. H. Cragg. This committee has the heavy responsibility of assessing the need of the University for physical facilities on both campuses, Edmonton and Calgary, in the coming years and making recommendations for the Board of Governors on priorities for new construction and the conversion of space in existing buildings to other uses. In this objective it is assisted by two other committees, one on space allocation and alterations, the other on grounds and utilities.

From the deliberations of all these various committees we hope there will emerge in due course a blueprint for the development of higher education in Alberta over the next twenty years. It is not possible to specify at this time all the matters which will appear on the agenda of these committees, but some consideration will be given to such matters as the establishment of new areas of education such as veterinary science and social work, the relative responsibilities of the Edmonton and Calgary campuses, the role of junior colleges, and the expansion of the Edmonton campus into the area of north Garneau.

Once again I am happy to report progress on new buildings for the University, one of which—the gymnasium—has almost been completed on the Calgary campus. In Edmonton construction has been started on the new Student Health Centre and tenders are out for the large building to provide accommodation for the Faculty of Education on 87th Avenue. Plans are rapidly proceeding for the new student dormitories and dining hall in Edmonton, as well as for the research library and the armed services building. The Library for the Calgary campus is

also in the active planning stage and a number of other projects are in the preliminary stages of consideration by the campus planning committee. In Banff the final wing on the administration building has been approved and construction should start shortly.

Registration figures for the fall emphasize the urgency of these plans for new facilities. The increase this year was 1,158, slightly in excess of last year's figure of 1,123 giving a total of 9,099 for day-time students plus 1,560 registered in evening credit courses in fourteen centres throughout the province making a grand total of 10,659 registered students taking at least one university course this winter. The Faculty of Education leads all the rest with 1,937 registered in Edmonton and 692 in Calgary for a total of 2,629 teachers-in-training. One interesting addition to the list is the first class of dental auxiliaries with 20 young women registered and hard at work. I am happy to say also that the registration at Lethbridge Junior College, affiliated with the University, has reached 132 full-time degree candidates this year . . .

According to the latest figures available we have this year a total of 328 students from outside Canada, of whom 313 are in Edmonton and 15 in Calgary. They come from 43 different countries in all parts of the world. The largest number—56—come from England, Scotland and Wales with 43 from the United States of whom 28 are registered in the Faculty of Graduate Studies, most of them for the Doctorate. India supplies 37, the West Indies 18, Hong Kong 16, Ireland 14, and Pakistan 13. Others come from Argentina, Australia, and Austria, from Ghana, Kenya, Nigeria, and Nyassaland, from Spain, Switzerland, and Yugoslavia. The contribution these welcome guests can and do make to the student life of our University cannot be measured in ordinary terms.

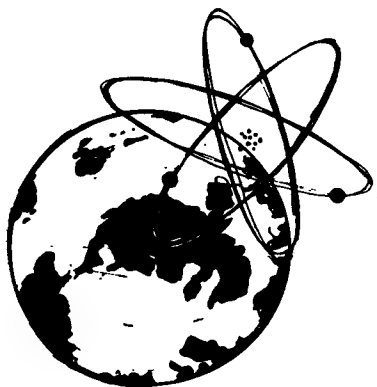
On the other hand, we can, I hope, make a worth-while contribution to these able and ambitious young people which will not only benefit

them personally, but will in due course be of great value to the countries from which they have come and to which they will, in many cases, be expected to return on the completion of their programs of study here.

You will have read in your newspapers of the special conference which has just concluded in Ottawa on the theme "Canada's Universities in a New Age". I should like to quote at length from an address delivered at this conference by Dr. J. F. Leddy, Academic Vice-President of the University of Saskatchewan:

"The attendance of foreign students has become a significant phenomenon in Canadian universities only in the past decade and notably in the past five years as the total has risen steadily, year by year, usually with an annual increase of about 400. There is every indication that these increases will be maintained and probably even augmented in the immediate future, a situation which will create some problems but which will bring many important advantages both to our universities and to Canada, far outweighing any incidental inconvenience to us."

"We should welcome this development and see in it an opportunity for us to repay by reassignment, Canada's long-standing debt to the many foreign countries which have accepted our University students in the past fifty years. We should recognize that we can perform an inestimable service for foreign students, in many cases probably not available to them anywhere else, at a crucial period in their lives, giving them training which will permanently influence the direction and the value of their subsequent careers. And we should gladly acknowledge that foreign students make a contribution of their own to the outlook and the spirit of the student body as a whole. They direct the friendly attention of Canadian students to foreign countries and to inter-



national questions which would otherwise appear remote. They are a living illustration and a constant reminder, close at hand, of the reality which stands behind the rhetoric about the new international age into which we have now moved.

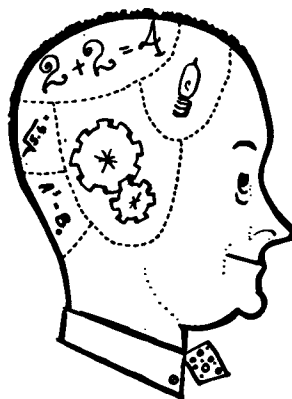
We professors take their presence for granted now, as if they had always been part of the Canadian university scene, but in fact they constitute the most striking change on the campus since the War. In my experience pre-War alumni returning to the university are even more impressed (and pleased) by what they regard as the novelty of foreign students than they are by the many new buildings recently erected."

Dr. Leddy's words apply to most Universities in Canada, and I am happy to say that the University of Alberta is making its contribution to this important work. I should like to conclude my discussion of this topic by quoting the words of Dr. F. Cyril James, Principal and Vice-Chancellor of McGill University, on the same theme:

"Higher education has, over the centuries, been one of the forces that have powerfully influenced the development of western civilization and laid the foundations of democracy. If we are concerned about the pattern of world society in the twenty-first century, the most important events of the last few years are not the explosion of atomic bombs but the kind of education that is being made available to the young men and

women in Africa, Asia and South America. It is in the minds of those now in school and college that the ultimate battle of the cold war will be won or lost, and the pattern of development of the two hundred new universities that have come into existence outside our borders since 1945 may well be more important during the lives of our children than the rapid development for higher education within Canada itself."

No more dramatic nor significant words have been spoken on the subject of higher education in this Canada of ours.



I have, so far, said little about the academic developments that are taking place this year and I propose to say only that the rapidly growing numbers of teaching staff are devoting their thought and their energies to keeping up the search for truth and its propagation among the students in their charge. Instead I wish today to say a few words about educational opportunities available outside the formal curriculum and the classroom.

At the latest count there were about ninety clubs and societies on the Edmonton campus and I am sure the number in Calgary is proportionately large. First of all, there are the Faculty and School clubs, ranging from the Agricultural Club through to the Theology Club and

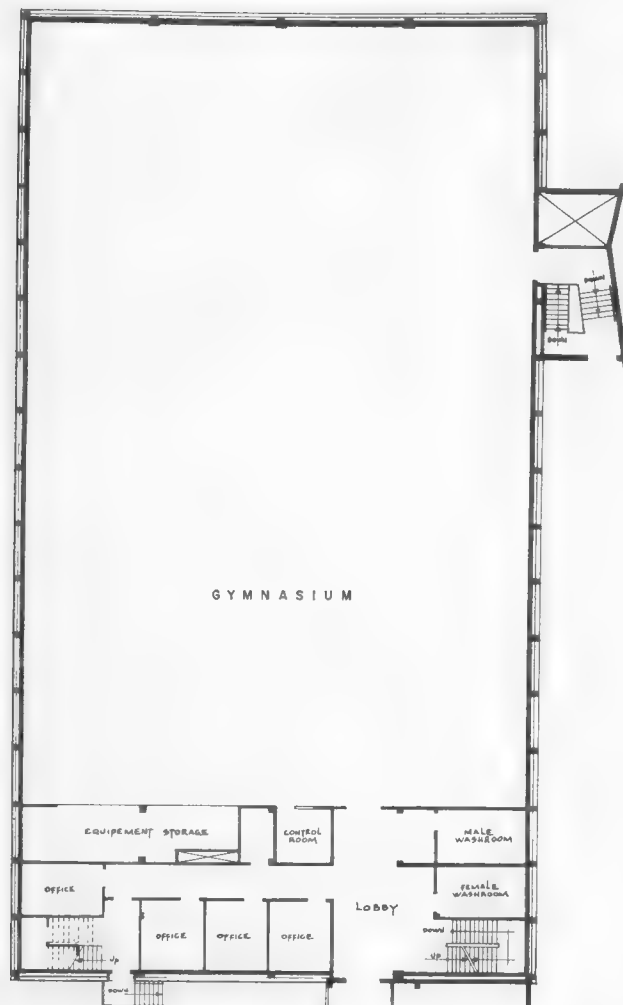
the Graduate Students' Association. Thirteen other clubs bring together groups of students who have special interest in such fields of study as French, Chemistry, History, Economics, and Psychology. Students from China, India, and Poland have their national clubs and there are twelve separate clubs whose members meet together as religious groups of various separate faiths or on an interdenominational basis. There are clubs for those interested in debating, music, radio, ballet, drama, and photography. For those who wish to participate in sport there are clubs for badminton, curling, fencing, judo, skiing, wrestling, track and field, and table tennis.

The executive experience alone which these organizations provide is far-reaching and the opportunities for learning, for recreation, and for friendly association of students of common interests are very important indeed. The public sometimes feel deep concern at the evidence they see (or hear about) of young people at the Universities being rowdy or impertinent or cynical. I can say with confidence that these are the rare exceptions and that the vast majority of the thousands of young people in the Universities of Canada, including our own, are spending their time profitably in study, in healthy exercise, intellectual as well as physical, and that they are a credit to their families, their professors, and their nation.



THE EDUCATION B

(Main Floor Plan)



THE new Education Building will be located North of 87th Avenue, between 112th and 114th Streets; East of the Provincial Auditorium. The main facade will face to the South.

The proposed building complex, is composed of three separate buildings; a ten storey Tower with four storied East and West Wings; projecting North from the wings are a two storey Library to the East, and a one storey Gymnasium to the West.

Exterior wall facing for the Tower and Wings will be precast panels, with white quartz aggregate and black granite chips. The periphery of the Gymnasium has a concrete block screen in a concrete frame. The sculptured type of precast concrete panel shows in the panels used on the Library, which are white quartz with a diamond shaped portion having a polished finish. Windows are aluminum framed, with double glazing. All rooms for instruction are provided with audio visual or black-out blinds.

Interior wall finishes are generally concrete block painted. There are some walls with plaster or wood finishes.

Floor finishes are vinyl, vinyl asbestos, wood, and precast terrazzo, depending upon the room function.

The Tower, Library and Gymnasium are fully-air-conditioned, while the Wings are ventilated with provision for future cooling. Most lighting is fluorescent, except in special cases, where incandescent illumination is required.

Owing to the increasing demands made upon this faculty, the East and West Wings are designed to accommodate two additional floors, while the Library is designed for one additional floor.

The Tower or Administration Block houses the General Administration Offices, Department of Curriculum and Instruction,

Depart
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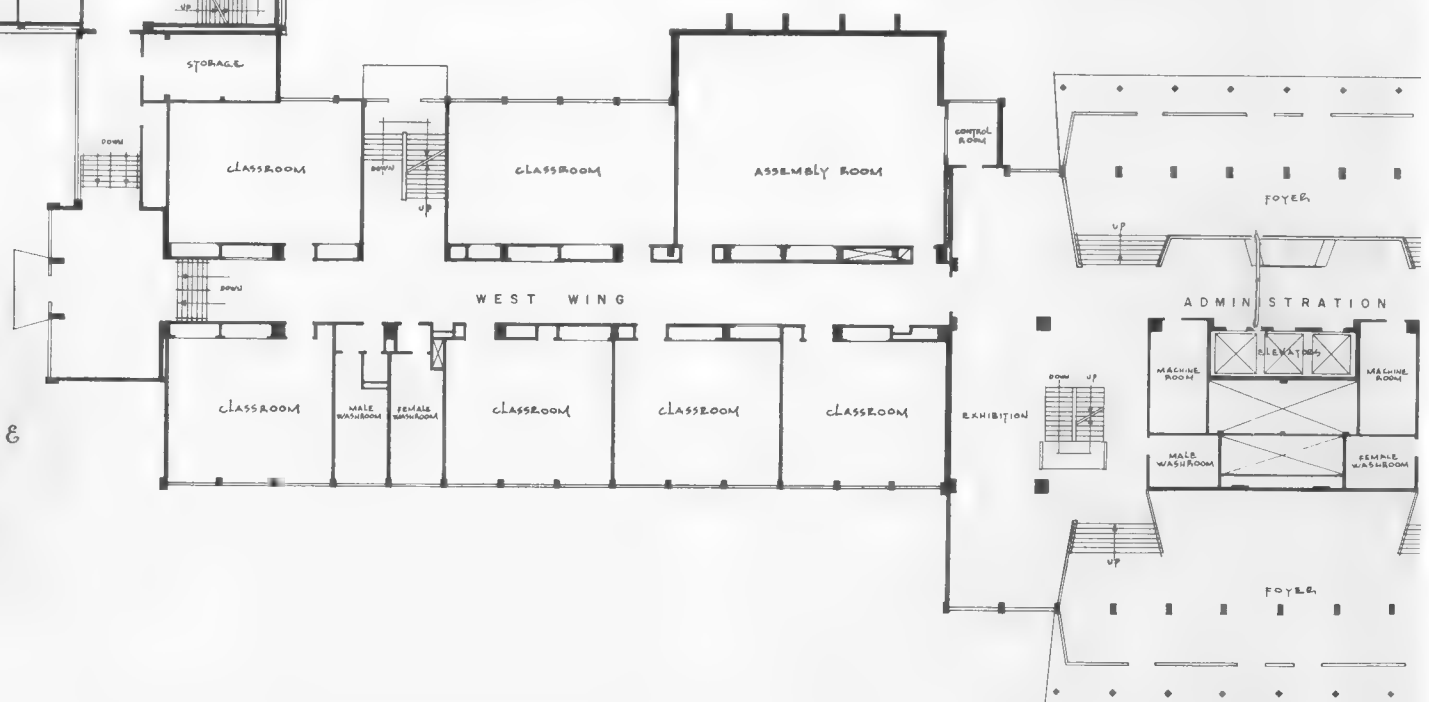
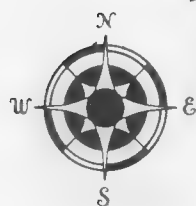
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EDUCATION BUILDING

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Department of School Administration, Department of Educational Psychology, Department of Educational History, Sociology and Philosophy, Faculty Research and Publications, Staff and Seminar rooms, Locker room and Mechanical rooms.

East and West Wings house the instruction areas, and consist of the following:

36 General purpose classrooms; 1 Language and Speech laboratory; 2 Mathematics classrooms; 2 General Science classrooms; 3 Art classrooms; 1 Ceramics classroom; 1 Secondary Physical Science classroom; 1 Secondary Biological Science classroom; 1 Typing and Shorthand classroom; 1 Office Practice classroom; 1 Combined Choral and Instrument classroom; 1 Choral Laboratory; 1 Ensemble and Rhythm Laboratory; 14 Practice Rooms for Music; 1 Lecture theatre for 150 students; 6 Seminar Rooms.

Student facilities, a lunch room and common room, are provided in the basement of the West Wing.

All instruction areas are provided with TV outlets for future audio visual instruction.

Tenders for this project were opened on December 7, 1961, and completion is scheduled for July, 1963.

The following are the gross areas for the new Education Building:

Library	28,618 square feet
Gymnasium	36,143 square feet
East and West Wings	116,580 square feet
Tower	108,741 square feet
TOTAL	290,082 square feet

Estimated cost of project \$4,348,750.40



Scholarships, Bursaries and Loans

Scholarships and financial assistance to students are becoming more and more an important part of the University picture. During the 1960-61 academic session, with the aid of the provincial Students Assistance Act, scholarships worth \$190,770 and grants and loans totalling \$260,770 and \$411,000 respectively were made available to matriculating students, undergraduates, and post-graduates. In addition provincial government assistance totalling \$363,000 was directed to students enrolled in the Faculty of Education.

Canada's Universities in a New Age

The main conclusion of a recent National Conference of Canadian Universities and Colleges on "Canada's Universities in a New Age" is a warning to Canada that the country's crisis in higher education continues, likely will grow worse instead of better and requires the urgent attention of governments and the universities.

Dr. Edward F. Sheffield, CUF Research Officer, spelled out in dramatic statistics what he expects it will cost to maintain and operate the universities in the next 10 years. He predicted enrolments of 182,900 students by 1965-66 and 312,000 by 1970-71, compared with 114,000 last year. He also predicted an almost threefold increase in annual capital and operating costs in the next five years.

He estimated annual operating costs at \$420 million by 1965-66, 2 1/3 times the \$177 million in 1960-61 and spending on new buildings at \$150 million a year during the next five years against \$60 million annually during the last five.

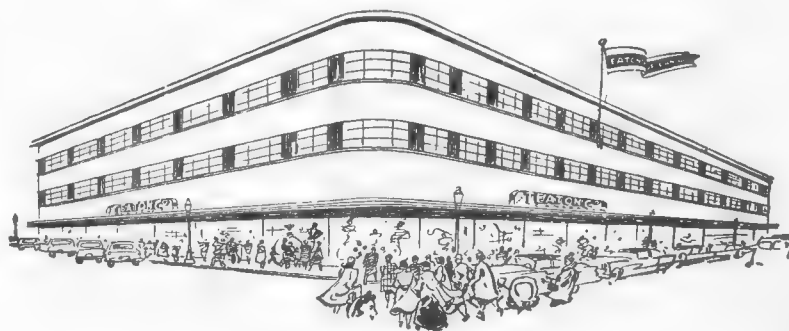
These predictions considerably exceed the forecasts made prior to the 1956 conference because there are more Canadians in the university age groups than previously anticipated and a higher proportion of them are attending university. He expected this year's enrolment figure, when compiled, to be within 3,000 or 4,000 of 128,900—the figure predicted in 1955 for the 1964-65 academic year.



LEGION BURSARIES

W. Rorke, centre, right, president of the Royal Canadian Legion's Alberta Chapter of the Polio Fund is shown presenting six bursaries, each worth \$350 to three first-year students and three second-year students in the school of physical and occupational therapy at the University. Recipients of the bursaries were: Marjorie E. Nent, Provost; Marlene R. Campbell, Calgary; Urania C. Dong, Lethbridge; Sandra L. Sundset, Bashaw; Bernice I. Calvert, Edmonton and Jane M. Vagt, Grande Prairie. Next to Mr. Rorke is Dr. J. R. Fowler, director of the school of physical and occupational therapy.

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Dean Named Commonwealth Travelling Professor

Dr. Walter C. MacKenzie, Dean of Medicine at the University of Alberta, has been appointed The Sir Arthur Sims Commonwealth Travelling Professor for 1962. Doctor MacKenzie will visit Nigeria, The West Indies, and Britain during his tour.

The Sims Travelling Professorship was endowed in 1946 by a New Zealand industrialist, Sir Arthur Sims, with the object of establishing closer links between scientific workers in the Dominions and in the older seats of learning and centres of research. The professor travels from the country in which he is ordinarily resident to various other countries of the Commonwealth for the purpose of assisting the advancement of medical science by lecturing, teaching, or engaging in research.

The appointment is made by the Council of the Royal College of Surgeons of England. Opportunity will thus be given for Doctor MacKenzie to lecture on and to discuss with colleagues various aspects of surgery and medical education.

Graduate Students Gain

The University is teaching more graduates, issuing more graduate degrees and entering more fields of doctorate studies. Graduate students in attendance, including 183 doctorate candidates, now number 629. Along with teachers registered for the summer session, the total graduate enrolment for 1961-62 is 816. This is an increase of 164 over the 1960-61 total.

The increase in graduate students has been most marked in the last 20 years in the fields of chemistry, physics, mathematics, geology and zoology. There have also been significant increases in educational administration, civil engineering and chemical and petroleum engineering.

However, the most recent increase of all has been in the field of the humanities and social sciences. Psychology graduates have increased from five to 24 in the last five years, and history graduates rose from six to 20 in the same period.

Of the more than 600 full-time graduates, 182 are non-Canadians or recent immigrants. They include 33 from India, 33 from England, 31 from the U.S., nine from the British West Indies, eight from Ireland, seven each from Scotland, Pakistan and Hong Kong, and five from Formosa. Of the remaining Canadian graduates about one third are from outside Alberta. These visiting Canadians come from all ten provinces of the Dominion.

The total number of graduate degrees presented each year is steadily rising. In 1959, 98 were conferred; in 1960, 114; and in 1961 there were 125. A total of 21 Ph.D. degrees were presented at the University's Spring Convocation last year.

Two new subjects are being taught at the doctorate level this year. They are psychology and english.

Under the heading of financing of graduate students more than half of them have their expenses paid entirely by scholarships. Grants for graduates are made by the University, the province, research institutes in Canada and abroad, and by industry.



Kimble Award Winner

The development of a new transport or holding medium for bacteriological specimens has brought the 1961 Kimble Methodology Award to an Alberta bacteriologist, Dr. R. D. Stuart, Provincial Bacteriologist and Director of the Provincial Laboratory of Public Health adjacent to the campus. This is the first time the Award has been given to a Canadian.

Transportation of bacteriological specimens from the field to laboratories, often over long distances and considerable time periods, has been a vexing problem to public health officials. The bacteria in these specimens, especially if obtained on swabs, tend to die out or to vary in number on their way to the laboratory, so that the bacteriologists may fail to find them or may come to a wrong conclusion about their significance. Thus the development of a simple method of maintaining, for considerable periods, specimens containing disease producing bacteria in the same condition as they leave the patient is very helpful in laboratory diagnosis.

Dr. Stuart was named the 10th winner of the annual Kimble Award by the Conference of State and Provincial Public Health Laboratory Directors in the U.S.A.

Marmosets, Monkeys and Moppets

A University of Alberta psychologist is comparing the learning ability of monkeys, marmosets and children in an attempt to deepen understanding of the human learning process.

Using a large box-like apparatus, Dr. Raymond C. Miles, of the department of psychology is studying differences in the abilities of different animals in learning simple standard problems.

Five-year old children will undergo the simple test, to provide some gauge of how human abilities surpass those of lower primates.

Marmosets are small animals from the lower end of the primate scale, but have more highly developed brain centres than other mammals. The squirrel monkey is little larger than the marmoset, but more intelligent. The test will also be given eventually to white mice and rhesus monkeys—source of polio vaccine—to broaden use of the measurement scales.

The test is a highly simplified intelligence test for animals. The subjects are placed in one half of the test box, separated from the problem section by an opaque screen.

The opaque screen is raised, and the subject shown a tray in which is a small well containing food.

The screen is dropped, then raised again. This time, however, the tray bears a row of objects, one of which covers the food well. The subject has one try at uncovering the correct object. If it is right, it gets the food.

In previous tests, Dr. Miles has shown clearly some differences between rhesus monkeys and marmosets. His purpose now is to extend the scope of his project over a broader range of the animal kingdom, including humans.

The test, of course, would present no problem to a normal human adult. Human memory is accurate enough and uses enough reference points that the adult would have trouble making a mistake.

With children there is some error, but even five-year olds are far smarter than the brightest rhesus monkeys.

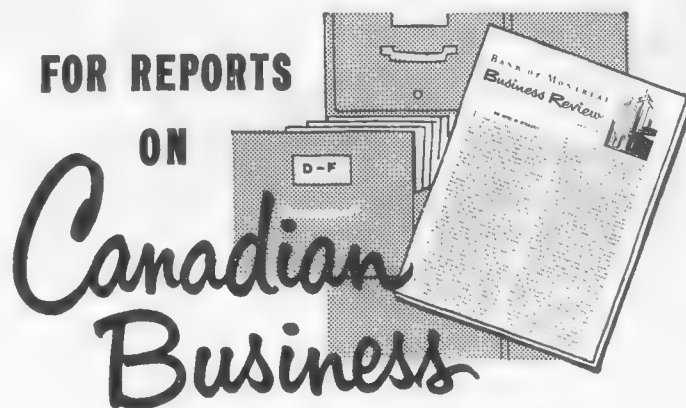
New Agricultural Department

Dr. Travis W. Manning, agricultural economist with the Federal Reserve Bank in Kansas City, has been appointed professor and head of the new department of agricultural economics and farm management.

The department has been established to meet a growing demand in Alberta during recent years for information and assistance in areas of farm management, agricultural economics, and marketing. Today the major problems of the agriculture industry and of farm people are more concerned with things relating

to the economics of agriculture, the marketing of their products, and the business management of their farms rather than with problems of production.

Dr. Manning received a bachelor's degree from the University of Oklahoma. He received a Ph.D. degree from the University of Minnesota in 1954 where he majored in agricultural economics. From 1953 to 1959 Dr. Manning was at South Dakota State College as a member of the department of agricultural economics staff.



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WORKING WITH CANADIANS IN EVERY WALK OF LIFE SINCE 1817

EVENTUALLY the University of Alberta's new Botanic Garden, opened near Devon in June last year, is to become a provincial show place.

More than this, however, its planners hope to see it become a source of information and inspiration for gardeners and scientists everywhere.

From the point of view of Alberta gardeners, its carefully-tended plots will provide new ideas for plants which will combine beauty with the ability to survive northern winters.

From the point of view of scientists everywhere, the gardens, doubling as a field laboratory, will provide valuable information on the abilities of plants to adapt to a rigorous climate.

Dr. James H. Whyte, director of the garden and professor of botany at the University of Alberta, emphasizes that the garden now is still in an embryonic stage.

In its first year of existence, despite an unpredicted attack by rabbits, the garden has seen a total of 1,300 packets of seed germinated to produce some 4,000 plants, out of a total of 1,459 packets of seed planted during the summer.

"We've collected so much information we haven't had a chance to begin studying the data," says Dr. Whyte.

Seeds are used in preference to cuttings or bulbs, he explains, because of the improved possibility of a hardy strain surviving.

The garden thus is still in the nursery stage, where the basic varieties which can be grown successfully are being cultivated.

In about seven years, Dr. Whyte hopes to see the garden used as a provincial educational centre. Regularly scheduled field days with conducted tours and lectures are included in the plan.

A series of paths will conduct tourists through systematically organized yet artistically designed beds.



BOTANIC GARDEN

to be

SHOW PLACE

If experiments prove successful, among the new plants on display will be hardy varieties of such flowers as Mediterranean Crocus which has al-

ready survived two Edmonton winters when temperatures at times had it frozen solid.

23RD ANNUAL MEETING *

GENERAL ALUMNI ASSOCIATION

Saturday, April 28th



Conference Room, Dept. of Extension

University of Alberta



*All members of Convocation are cordially invited to
attend the business sessions which get underway at
9 a.m.

The Problem With Problem-Solving

The problem of how people solve problems is subject of a research project in the department of psychology.

Dr. Charles N. Uhl, formerly of Stanford University and the University of Oregon, has constructed a machine which tests and measures human problem-solving ability through different coloured rows of lights.

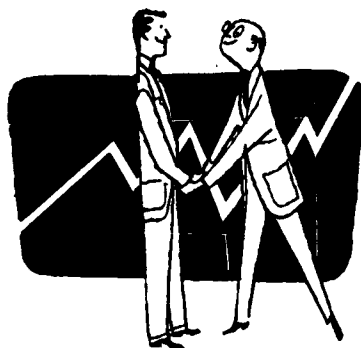
The lights are arranged in three horizontal rows of 15 lights each. One light in each row flashes creating a pattern posing the "problem". The subject tries to find the "correct answer" to the problem by lighting one of 29 lights set in another row below the stimulus panel. He makes his decision, then pushes a button to learn the actual correct solution from the machine.

Distribution of the lights is controlled by a punched tape prepared by a computer into which information regarding relationship of stimulus variables has been fed.

Uhl feels the study shows results which are characteristic of the way people solve certain problems, but insists that things are still at the laboratory stage.

He sees one possible application of the equipment in the field of clinical psychology, in which diagnoses often are based on the results of several tests.

By feeding a computer data on relationship and distribution of scores from various tests such as those measuring neurotic tendencies, it might be possible to prepare tapes presenting problems on the machine corresponding to those faced in hospitals and consulting rooms. Thus clinicians could be trained to recognize relationships in diagnosis with a reduced error possibility.



Matching Grants

Do you work for Canadian General Electric, Ford Motor Company Ltd., General Foods or Hooker Chemicals?

These four corporations in Canada now have matching grant programmes under which they contribute to universities an amount equal to that given by their alumni employees.

We need your help. The personnel departments of some of these companies are not able to supply the names of employees who are U. of A. graduates. Therefore we appeal to all alumni who are employed by any of these firms to let the Alumni Office know where they work.

Pool of Trained Administrators

Specially-trained school principals and inspectors soon will be available as a result of the implementation of a recent \$50,000 grant to the University.

The plan will provide a pool of trained men capable of stepping into principals' and superintendents' positions ready for the job.

Money for the training of the men will come from a grant provided in part by the Kellogg Foundation, the provincial government, and the school board hiring any of the graduates. The grant is spread over a five-year period.

Selection of the men will be made by the Faculty of Graduate Studies. Alumni with degrees in education, arts or science will be sought. Their training will last over a two-year period during part of which they will be active in the field.

Education officials say that the pool of available men will greatly benefit outlying areas when applicants are needed for either a principal's or superintendent's position. Under this new arrangement the department will have a ready list of those who have completed their training and are capable of taking over the positions.

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"The New Trail" is hard put these days to keep abreast of the arrivals and departures of the teaching staff, however, some of these we do hear about.



Dr. Eric Hanson, professor and head of the department of political economy is now in Norway lecturing on the development of the international economy at the Norwegian College of Economics and Business. His appointment lasts until April.

Each year selected professors from NATO countries are asked to give a series of visiting lectures or undertake seminars or tutorial work in fields of study of direct interest to NATO.

In quite another theatre **Moyna Gordon**, an assistant professor of physical and occupational therapy since 1955, has left to help set up a school of physiotherapy at the Christian Medical College and Hospital in Vellore, South India. Her stay will be for a three-year period. Miss Gordon will begin her work in India by studying

Tamil, a native language, planning the new school's curriculum, and studying the local needs in physiotherapy.

The 750-bed hospital at Vellore is one of the leading centres for research and treatment of leprosy in India. It is the first hospital in India to treat leprosy by chest therapy, a form of therapy used here for asthma, bronchitis and following heart surgery.

Plans call for the school of therapy to open in July, 1962. A two-year diploma course will be offered. The medical director of the school is Dr. Paul Brank, well-known for reconstructive surgery of the paralyzed hand, a result of leprosy.

Miss Gordon's trip is being sponsored by the Women's Missionary Society of the United Church of Canada.

The soil of a proposed irrigation development in Argentina and Uruguay will be tested during the next short while by **William E. Bowser**, soil specialist with the Canadian department of agriculture stationed at the University.

One of our most distinguished graduates in the field of agriculture, Mr. Bowser is meeting now with United Nations' officials to discuss the assignment which originated as a request from Argentina and Uruguay to the Food and Agricultural Organization of the United Nations for assistance through its special development fund. The request was for aid in development of irrigation systems in one valley of each country.

Mr. Bowser's job is to decide if the soil is satisfactory for irrigation. Purpose of the project is to supply more food for the people and to increase the countries export potential.

This is Mr. Bowser's third assignment with F.A.O. In 1953 and 1954 he was in the Punjab district of West Pakistan studying the problem of excess salinity in the irrigated land. In 1958 he was in Egypt where he was sent to help solve the problem of lack of water in the western desert. The system started in Egypt is being used at present in Israel for agricultural development of their desert lands.

Another posting afar is that of **Dr. W. E. Smith**, professor of genetics, who left recently for the Near East where he will be filling an eighteen-month assignment as regional agronomist for the Food and Agriculture Organization.

His headquarters is Damascus, Syria, and work will take him to thirteen countries, Afghanistan, Cyprus, Ethiopia, Iran, Iraq, Jordan, Lebanon, Libya, Pakistan, Sudan, Turkey, Egypt, and Syria.

The project with which Dr. Smith is associated was established in 1952. Although much good work has already been done by way of increasing yields of cereals in areas of the Near East there is still much to be accomplished. Recently the United Nations' "Freedom from Hunger" campaign has provided additional funds for this important work.

Sources of Capital Funds

Reports to the Canadian Universities Foundation show that, in the four-year period 1955-56 to 1958-59, funds received or pledged to 31 universities and colleges for construction purposes amounted to approximately \$218 million.

Percentages from the chief sources were as follows:

- (1) Provincial governments ..51%
- (2) Individuals, corporations and foundations, through campaigns and occasional gifts28%
- (Data published by the Industrial Foundation on Education provide the basis for the estimate that about 10% was from business and industry.)
- (3) Government of Canada 8%
- (4) Bond and debenture issues 5%
- (5) Other sources, including churches, municipal governments, endowment income, and sale of land and buildings 8%

Here, as in the case of operating income, the contributions of governments amounted to more than half (60%, including municipal governments), but in this instance the provincial governments' share exceeded that of the federal government by more than 6 to 1. With respect to operating income the ratio was approximately 4 to 3.

—C.U.F. report



'15

The man who helped to direct the administration of justice and police operations in Alberta for many years, **H. J. Wilson**, the province's deputy attorney-general, will retire this spring.

'20

Dr. J. F. Lehmann has been appointed director of work study for the National Productivity Council in Ottawa.

'23

Following the death of **Dr. N. H. Grace** a distinguished graduate of the University was called out of retirement to become acting director of the Alberta Research Council. **W. A. Lang** will fill this position until a new director is named.

'25

Dr. Morley A. R. Young, Lamont, represented Canada at the 15th General Assembly of the World Medical Association which met in Rio de Janeiro last fall. Dr. Young is a past president of the Canadian Medical Association.

E. R. Tavender, Calgary, has been appointed a district court judge for the southern section of the Alberta district.

'26

Dr. Darol Froman has retired as technical associate director of the Los Alamos Scientific Laboratory of the University of California located in New Mexico. Dr. Froman lectured at the University in 1930-31.

'28

Dr. J. C. Jonason of the Alberta Department of Education has been named president elect of the Canadian Association of School Superintendents and Inspectors.

R. E. Walton has been appointed manager of the purchasing division of C. M. and S. at Trail.

'31

The position of Alberta's deputy minister of health was recently filled by **Dr. M. G. McCallum**.

'32

The new director of Alberta's division of tuberculosis control is **Dr. H. H. Stephens**, medical superintendent of the Aberhart Memorial Sanatorium.

'34

A former president of the Alumni Association, **B. W. Pitfield**, vice-president of Northwest Industries Ltd., was recently elected president of the Edmonton Chamber of Commerce.

'36

An interesting note from New Zealand received recently relates the experiences of **Prof. and Mrs. J. C. Garrett** who have been on a year's sabbatical leave in Europe and have been visiting universities in the United States. Prof. Garrett is head of the English department at the University of Canterbury in Christchurch. Mrs. Garrett recently found herself the first woman to be called to jury service in a New Zealand criminal case.

'40

In recognition of his work in public health and medical entomology, **J. H. Brown**, Alberta director of entomology and vector control, was recently elected a fellow of the Royal Entomological Society, London, England.

Some new appointments have been made recently in the provincial department of health. **Dr. J. D. Wallace** has been appointed to the new post of executive director of the University Hospital.

'41

A. V. Marcolin has been appointed manager of the metal sales division of C. M. and S.

'42

A district agriculturist with headquarters in Grande Prairie, **Mervyn Jaque**, has been selected for graduate study in agricultural extension at Colorado State University.

The only district agriculturist in Alberta to be named for professional training at the university, Mr. Jaque will study in the field of adult education techniques, methods of research, extension organization, leadership training, program development, sociology and related phases of advanced extension work in the adult education field.



ALUMNI MATTERS IN MALAYA

In an interesting note received recently from the High Commissioner for Canada's office in Malaya, Ivan Head '51 referred to "three of your lost sheep attending a cocktail reception in company with two beautiful young ladies from this part of the world. From left to right the alumni, in the remote possibility that you do not recognize us, are **Ronald S. MacLean**, circa 1950, **Arthur Kroeger**, circa 1955, and yours truly. The ladies in the same order are **Shrimati Rukmini Menon**, a member of the Indian Delegation and 'Che Norella (Malay). The bearded gentleman clutching his liver . . . is a House of Commons interpreter."

'45

The Alberta Teachers' Association recently awarded a fellowship to **Michael Skuba**, Smoky Lake. Mr. Skuba is completing his studies for a doctorate degree in administration at the University.

'46

R. J. Gray has been appointed special assistant in the labor department of C. M. and S.

'47

Leslie G. Chatten has been awarded a Ph.D. degree from Ohio State University.

A Crown prosecutor in Edmonton for the past 8½ years, **James B. Ritchie**, has been named a solicitor in the attorney-general's department.

H. B. Scott is the new assistant manager of B.A. Oil Company, Calgary refinery.

'48

The State University of Iowa recently conferred a Ph.D. degree on **Robert P. Kroetsch**.

Geraldine M. Farmer has been awarded a Ph.D. degree from the University of Minnesota.

W. H. Hurlburt is the chairman of the newly-formed Edmonton zoning-interim development appeal board.

A professional training grant for a year's study in medical bacteriology at the University of Alberta has been placed with **Dr. S. I. Hnatko**.

'49

A prize for theological studies was awarded **Alfred Hosking** at a recent ceremony conducted at St. John's College, Lockport, Manitoba.

'50

Sqdn. Ldr. Donald W. McNichol, based at Ramstein, Germany, was recently presented with the Canadian Forces decoration.

An honors graduate in history, **William Rodney**, recently received a Ph.D. from the University of London, England.

Donald H. Dabbs has been appointed assistant professor of horticulture at the University of Saskatchewan.

'53

Margaret A. Brine has returned to Toronto from her studies in Paris to teach at Victoria College, University of Toronto.

'55

G. R. Winter, professor of marketing in the faculty of commerce, has been awarded a Ph.D. degree in economics from Iowa State University.

James F. Hanlan is conducting laboratory research work for DuPont of Canada Ltd. at Kingston.

A. Kroeger is third secretary in the office of the High Commissioner for Canada, New Delhi, India.

James Wm. Carver was recently appointed business manager of the University of Alberta, Calgary.

Dr. B. Kuzyk has been re-elected president of the Alberta Chapter of the Canadian Society of Dentistry for Children.

Murray A. Kehr has been promoted to chief design engineer in the construction branch of the Alberta department of highways.

Antony Santiago is currently conducting research work in botany at the University of Malaya in Kuala Lumpur.

'57

A prize fellowship in the humanities has been placed with **Robert R. Stuart** by All Soul's College, Oxford, which will enable him to do some research and teaching.

'58

Morley S. Lipsett has received his M.Sc. degree in physics from Massachusetts Institute of Technology.

A psychiatric social worker at the newly-formed social service department of the University Hospital, **Judy Phillipson**, recently received her Master's degree in social work from McGill University.



'59

A special award for the painting judged best in an art competition held recently in Ottawa and open to all R.C.A.F. personnel and dependents in Canada and Europe, was won recently by **Mrs. Thomas Jennings** (nee **Lorna Lyle**) who majored in mural painting the last two years that she was on the campus.

For her painting "The Ritter," a building in the old university city of Heidelberg which is an example of 16th Century German Renaissance architecture, **Mrs. Jennings** received the special award for the best entry in the show. She also captured first, fourth and fifth prizes in the professional class of prize-winning paintings.

D. E. Webber, presently enrolled at the University of Bombay, has been awarded a \$4,000 scholarship by the IODE for study at a Commonwealth university.

'60

A Commonwealth fellowship to carry out post-graduate geological research in Australia has been awarded to **Robert K. Jull**. The award is tenable at the University of Queensland, Brisbane. Mr. Jull will specialize in coral fossil study.

Miss Nadia Hochachka has been awarded a \$250 scholarship by the Edmonton branch of Zonta International.

Twenty-three-year-old **Jim Coutts** of Calgary is the new national president of the Young Liberal Federation of Canada.

A member of the women's department of the Edmonton Journal for the past year and a half, **Donna Deepprose**, is attending Columbia University, New York, where she will study for a master's degree in journalism.

'61

David J. Schmirler has received a \$1,500 Johnson Terminals Ltd. fellowship in commerce which will enable him to complete his studies on a master of business administration degree at the University of British Columbia.

A 1961 Shell Fellowship valued at \$1,800 was placed recently with **Orville C. Sandall**, Calgary.

Dr. Earl V. Gowda is continuing studies in restorative dentistry at the University of Washington.

A graduate in household economics, **Louise Roose**, Camrose, has been appointed assistant supervisor of 4-H Clubs for the province.

F/O J. G. Spencer has successfully completed the RCAF navigation officers' course at the air navigation school in Winnipeg.

Also with the RCAF is **F/O K. H. Pauls** who completed the RCAF radio officers' course at the air navigation school in Winnipeg.

Elaine Staniland is studying for her master's degree, majoring in history, at Reading University, England.

One of 134 graduate students from 32 countries who received grants in 1961 from Rotary International, **Lawrence A. Mysak** has left to study mathematics at the University of Adelaide, Australia.

Johann Steiner has been named by the University as Pan American Fellow in geology and **Richard J. Hamilton** as Pan American Fellow in petroleum engineering.

DEATHS

Mrs. Edwin T. Mitchell (nee **Decima E. Robinson**) '11, '12—first woman graduate of the University of Alberta.

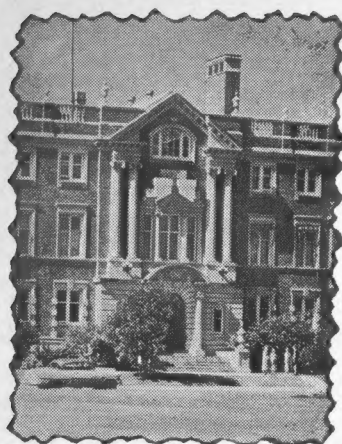
Dr. C. Whitney Banks '21—former Calgary physician and member of the New York University Medical School.

C. K. Carr '38—killed while mountain climbing.

Alan B. Boomer '49—following an attack of poliomyelitis in Palma, Majorca.

Dr. Donald Cherry '54—Calgary dentist.

Geoffrey G. Woodhams '56—resident in Vancouver.



3rd Annual

UNIVERSITY OF ALBERTA ALUMNI FUND

TARGET - - \$25,000

FUND GIFTS - - \$17,151

NUMBER OF CONTRIBUTORS - - 1,813

Dr. E.H. Moss,
11101 - 87 Ave.,
Edmonton, Alta.